

Work Order ID 81248***81248***

Page 1

March-12-12 12:45:31 PM

Item ID: D3319-1

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Wearplate

Start Date: 12/03/2012 Start Qty: 10.00

10

Cust Item ID:

Required Date: 26/03/2012 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals: Process Plan: MLJ Date: 12/03/12

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D3319

Rev B

100

0.00

100

FLOW WATER JET

Waterjet

Memo

0.00

FLOW CNC Waterjet

1-Cut as per Dwg D3319

Dwg Rev: BSProg Rev: BS

2-Deburr if necessary

B12-3-21

(12)

1010.00

110

QC2- Inspect parts off machine FAI/FAIB

0.00

110

QC

Memo

0.00

Quality Control

B12-3-21

120

QC8- Inspect parts - second check

0.00

120

QC

Memo

0.00

Quality Control

12 03 22 (11)

Dart Aerospace Ltd

W/O: 81248		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: ~~D3319-1~~ D3319-1 PAR #: Fault Category: Small Fab / water jet NCR: Yes No Yes DQA: OK Date: 12/04/04
 Resolution: SCRAP Disposition: SCRAP QA: N/C Closed: OK Date: 12/4/4

NCR: 12-1799		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
12.03.22	100	1 part was cut to short, water jet error.	S 12/13/22 as per	Scrap & Destroy	W 12.03.22	S 12/13/22	S 12/13/22 as per	S 12/13/22

NOTE: Date & initial all entries

Work Order ID 81248

March-12-12 12:45:31 PM

81248

Page 2

Item ID: D3319-1 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Wearplate
 Start Date: 12/03/2012 Start Qty: 10.00 ***10*** Cust Item ID:
 Required Date: 26/03/2012 Req'd Qty: 10.00 ***10*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

140	NC BRAKE	0.00				(11)			
140									
Brake NC	Memo	0.00							
Brake NC	1- Form using DT8326 & DT8261 as per Dwg D3319Rev: <u>B</u>								
	2- Form flat on press using DT8776 block								

150	QC6- Inspect dimensions to drawing	0.00							
150									
QC	Memo	0.00							
Quality Control									

160	Weld per dwg A/R Hardcoat steel Batch: _____	0.00							
160									
Large Fab	Large Fab	0.00							
Large Fab	Memo	0.00							
	1- Layout weld location as per Dwg D3319 using jig D3319-1T3								
	2- Weld hard surface using DT8755 per QSI 004 and Dwg D3319 Rev: <u>B</u>								
	Qty Part Number Description Batch								
	A/R N/A 228/7560 Hardcoat Rod <u>m119712</u>								

m 12.03.22 (11)

(x11) me/MAL 12-03-28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

Work Order ID 81248

81248

Page 3

March-12-12 12:45:31 PM

Item ID: D3319-1

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Wearplate

Start Date: 12/03/2012 Start Qty: 10.00

10

Cust Item ID:

Required Date: 26/03/2012 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

170

QC10- Inspect visual per QSI004- ground welds

0.00

170

QC

Memo

0.00

8.2/03/28

Quality Control

180

QC5- Inspect part completeness to step on W/O

0.00

180

QC

Memo

0.00

8.2/03/28

Quality Control

190

Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3

0.00

190

Powdercoat

Memo

0.00

m117338

Powder Coating

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

2h40
320°F
3h10

11

8

OP 12/03/28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 81248

March-12-12 12:45:31 PM

81248

Page 4

Item ID: D3319-1 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Wearplate
 Start Date: 12/03/2012 Start Qty: 10.00 ***10*** Cust Item ID:
 Required Date: 26/03/2012 Req'd Qty: 10.00 ***10*** Customer:
 Reference:

Approvals: Process Plan: Date: Tooling: Date: Run Start ***NR1***
 QC: Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200	QC3- Inspect Part Finish	0.00							
200									
QC	Memo	0.00							
Quality Control									
210	Packaging	0.00							
210									
Packaging	Memo	0.00							
Packaging	Identify on inside surface using a permanent fine point marker with the following: TCCA-PDA, Dart Aerospace Ltd. P/N: D3319-1, B/N: BXXXXX For Product Eligibility see PDA05-18 and Stock Location: <u>85497</u>								
220	QC21- Final Inspection - Work Order Release	0.00							
220									
QC	Memo	0.00							
Quality Control									

11. SP 12-03-28

(11) SP 12-03-29

12/3/29

120329

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

March-12-12 12:45:35 PM

Page 1

Work Order ID: 81248

81248

Parent Item: D3319-1

D3319-1

Parent Item Name: Wearplate

Start Date: 12/03/2012

Required Date: 26/03/2012

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP: B05.10.14Added step 9, dwg rev B KJ/EC
IPP Rev:C Now on Waterjet 06-10-26 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M1010S18GA		Purchased	No			100	sf	193.8000	0.628	6.610526	8,		

M1010S18GA

1010/1025 SHEET .048

**

B 12-3

Location

Loc Qty

Loc Code

MAT019

193.8

116268

3

117806

190.8

~~117806~~

(12)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	81248
Description: Wearplate		Part Number:	D3319-1
Inspection Dwg: D3319 Rev: B			Page 1 of 1


FIRST ARTICLE INSPECTION CHECKLIST

X

Prototype

[illegible]

Measured by: <i>B</i>	Audited by: <i>[Signature]</i>	Prototype Approval:	N/A
Date: <i>12-3-21</i>	Date: <i>12-03-22</i>	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	07.05.31	New Issue	KJ/JLM	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

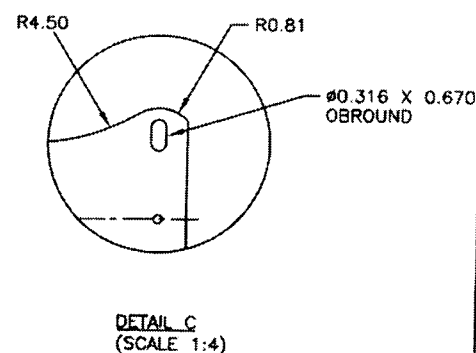
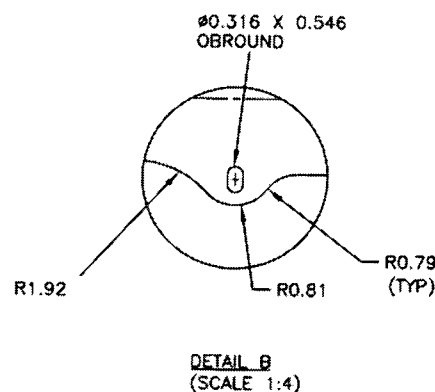
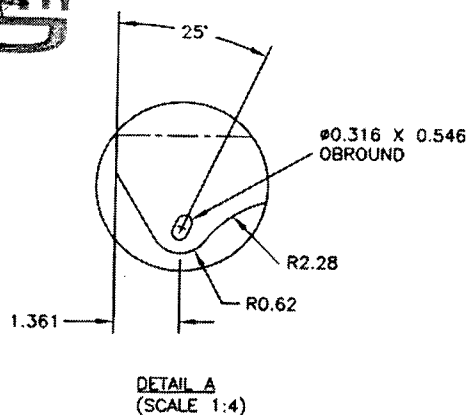
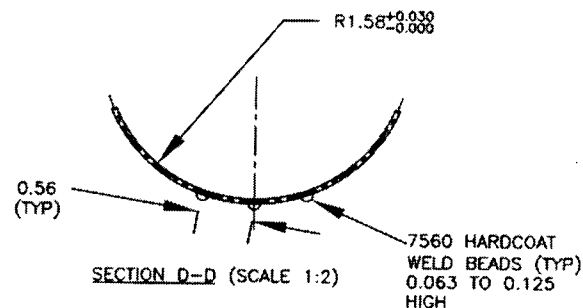
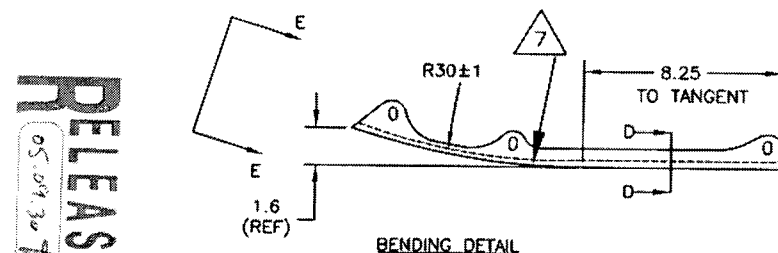
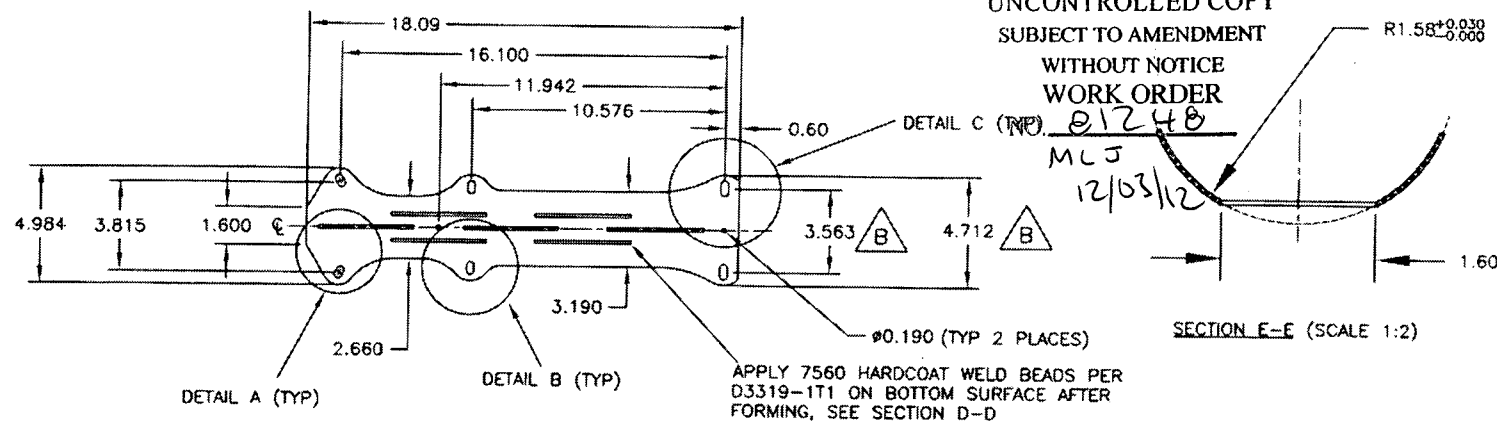
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER



D3319-1 WEARPLATE

- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W SERIES STEEL 18 GAUGE (0.048 THICK)
- 2) FINISH: POWDER COAT GREY SANDTEX (REF.4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) PART IS SYMMETRICAL ABOUT CENTERLINE
- 5) ALL DIMENSIONS IN INCHES
- 6) WELD PER DART QSI 004
- 7) IDENTIFY ON INSIDE SURFACE AS INDICATED USING FINE POINT PERMANENT INK MARKER:
"TCCA-PDA, DART AEROSPACE LTD., P/N D3319-1 B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA05-18"

DESIGN	DRAWN BY	DART AEROSPACE LTD
P11	04	HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO.
		D3319
DATE	TITLE	SHEET 1 OF 5
05.06.06	WEARPLATE	SCALE 1:8
A	NEW ISSUE	
05.06.06	WIDEN HOLES, REDUCE WIDTH -3/-5/-7	

RELEASED
05.09.30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

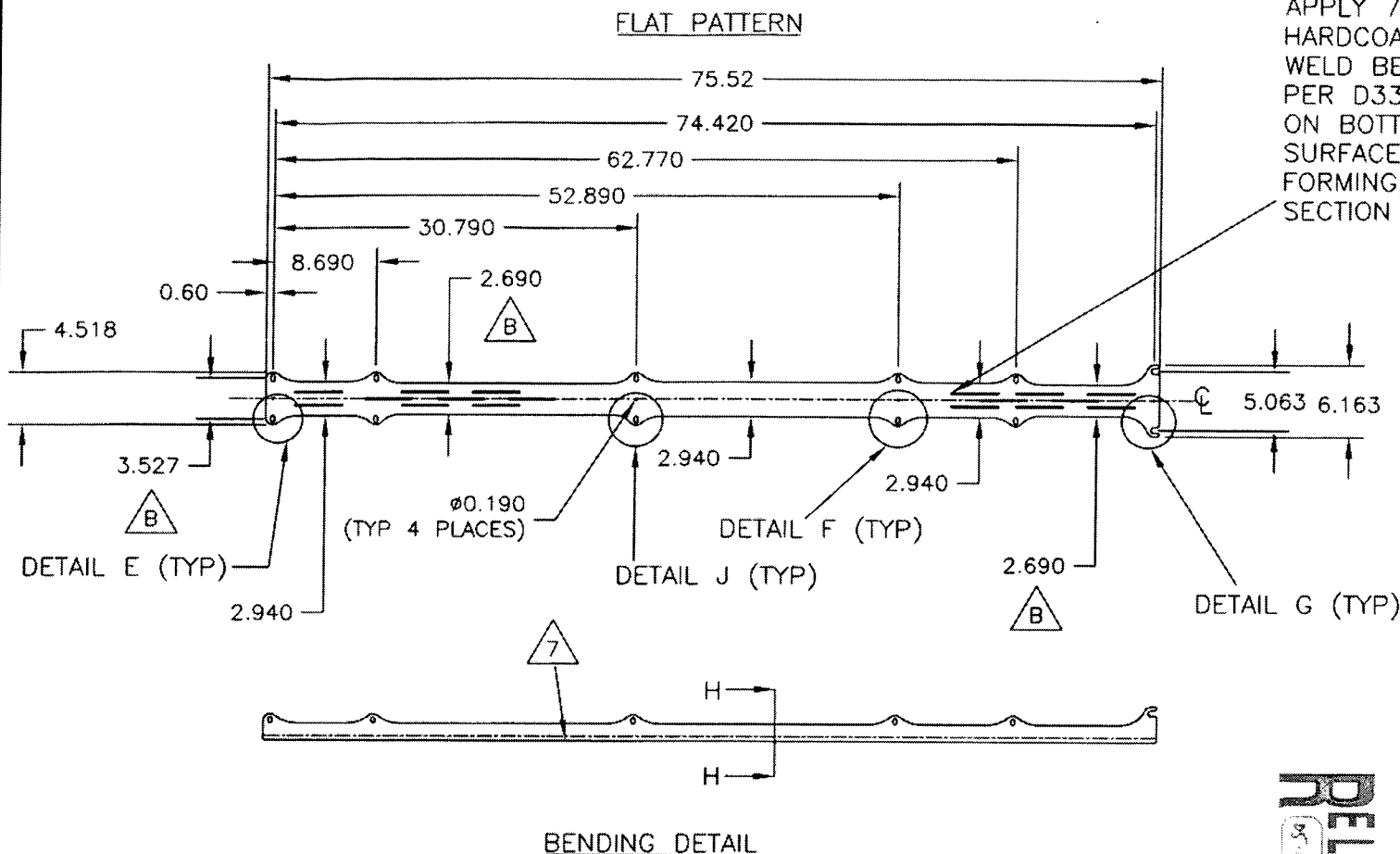
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

81248



APPLY 7560
HARDCOAT
WELD BEADS
PER D3319-3T1
ON BOTTOM
SURFACE AFTER
FORMING, SEE
SECTION H-H



RELEASED
05-01-30

DESIGN	DART AEROSPACE LTD	DATE	05.06.06
CHECKED	04	APPROVED	04
DRAWING NO.	D3319	TITLE	WEARPLATE
SHEET 2 OF 5		SCALE	1:15
REV. B			

D3319-3 WEARPLATE

- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W SERIES STEEL 18 GAUGE (0.048 THICK)
- 2) FINISH: POWDER COAT GREY SANDTEX (REF.4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) PART IS SYMMETRICAL ABOUT CENTERLINE
- 5) ALL DIMENSIONS IN INCHES
- 6) WELD PER DART QSI 004
- 7) IDENTIFY ON INSIDE SURFACE AS INDICATED USING FINE POINT PERMANENT INK MARKER: "TCCA-PDA, DART AEROSPACE LTD., P/N D3319-3 B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA05-18"

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

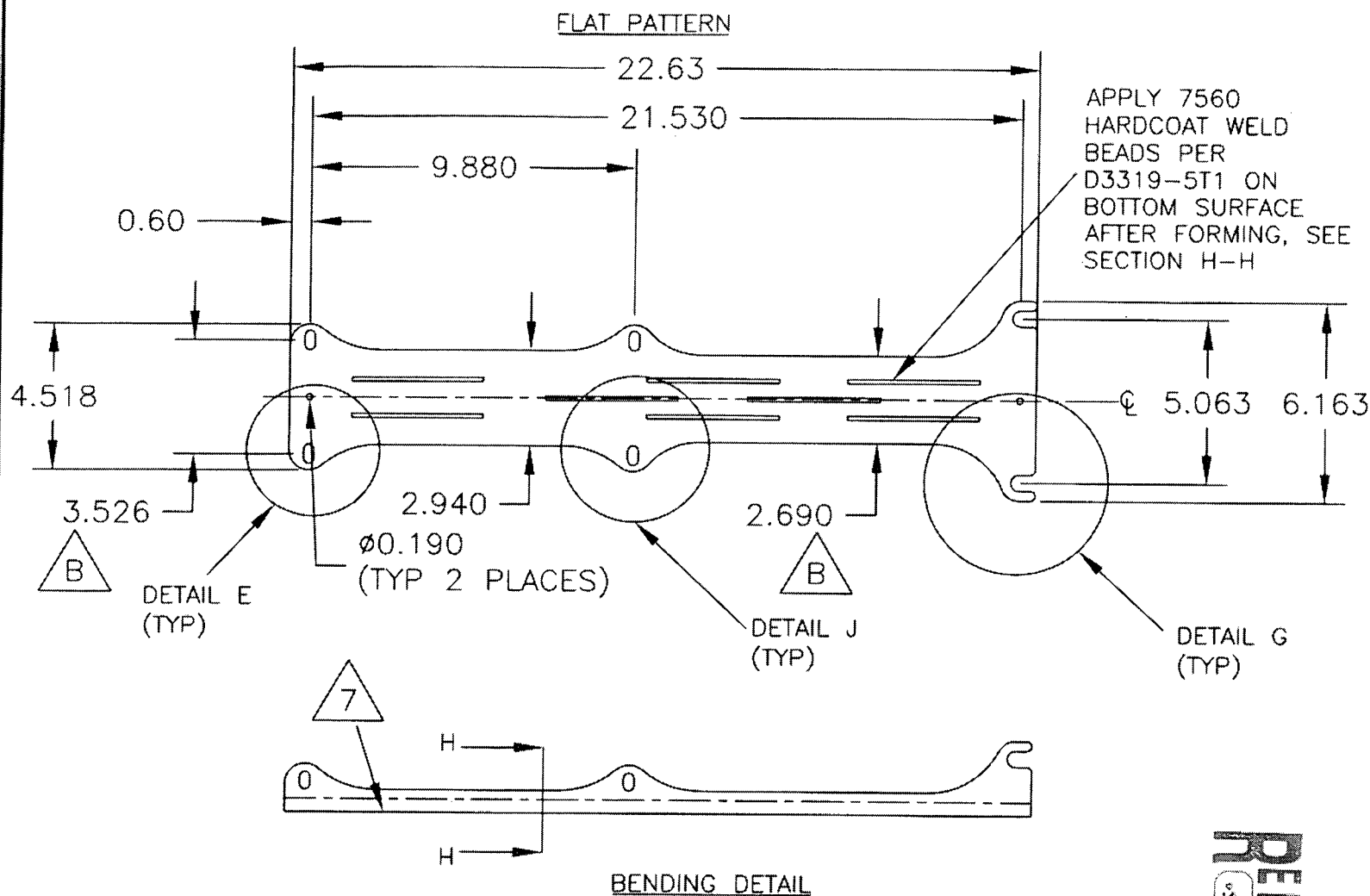
81248

DART

DESIGN	041	DRAWN BY	GH	DART AEROSPACE LTD
CHECKED	<i>[Signature]</i>	APPROVED	<i>[Signature]</i>	HAWKESBURY, ONTARIO, CANADA
DATE	05.06.06	DRAWING NO.	D3319	REV. B
		TITLE	WEARPLATE	SHEET 3 OF 5
				SCALE 1:5

RELEASED
05.07.30

APPLY 7560
HARDCOAT WELD
BEADS PER
D3319-5T1 ON
BOTTOM SURFACE
AFTER FORMING, SEE
SECTION H-H

**D3319-5 WEARPLATE**

- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W SERIES STEEL 18 GAUGE (0.048 THICK)
- 2) FINISH: POWDER COAT GREY SANDTEX (REF.4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) PART IS SYMMETRICAL ABOUT CENTERLINE
- 5) ALL DIMENSIONS IN INCHES
- 6) WELD PER DART QSI 004
- 7) IDENTIFY ON INSIDE SURFACE AS INDICATED USING FINE POINT PERMANENT INK MARKER:
"TCCA-PDA, DART AEROSPACE LTD., P/N D3319-5 B/N BXXXXX,
FOR PRODUCT ELIGIBILITY SEE PDA05-18"

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

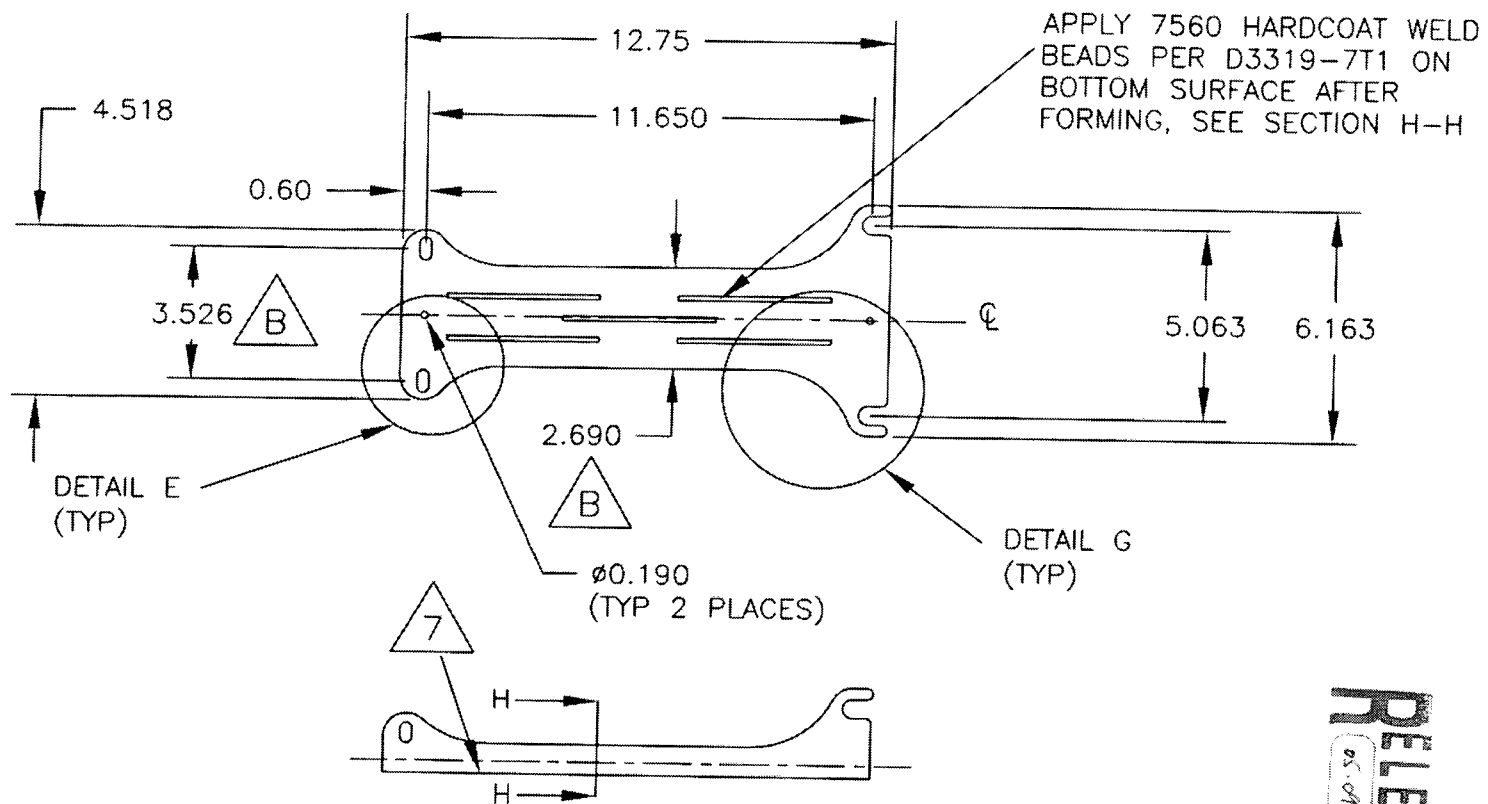
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DART

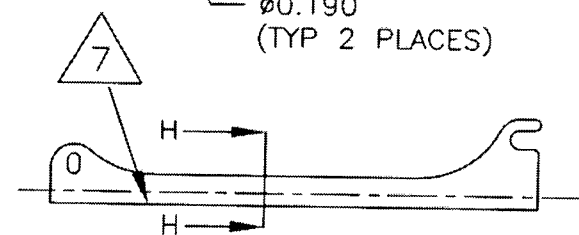
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CHECKED	PH	APPROVED	PH	HAWKESBURY, ONTARIO, CANADA
DATE	05.06.06	TITLE	D3319	REV. B
			WEARPLATE	SHEET 4 OF 5
				SCALE 1:5

RELEASED
05.09.30

FLAT PATTERN



BENDING DETAIL



D3319-7 WEARPLATE

- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W SERIES STEEL 18 GAUGE (0.048 THICK)
- 2) FINISH: POWDER COAT GREY SANDTEX (REF.4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) PART IS SYMMETRICAL ABOUT CENTERLINE
- 5) ALL DIMENSIONS IN INCHES
- 6) WELD PER DART QSI 004
- 7) IDENTIFY ON INSIDE SURFACE AS INDICATED USING FINE POINT PERMANENT INK MARKER:
"TCCA-PDA, DART AEROSPACE LTD., P/N D3319-7 B/N BXXXXX,
FOR PRODUCT ELIGIBILITY SEE PDA05-18"

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

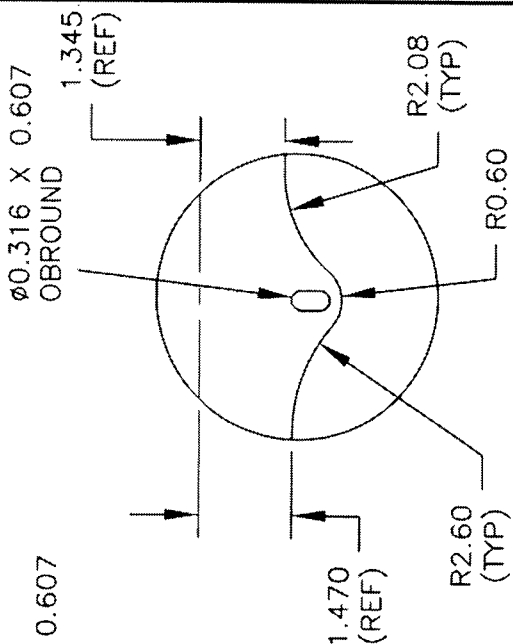
NOTE: Date & initial all entries

812 48

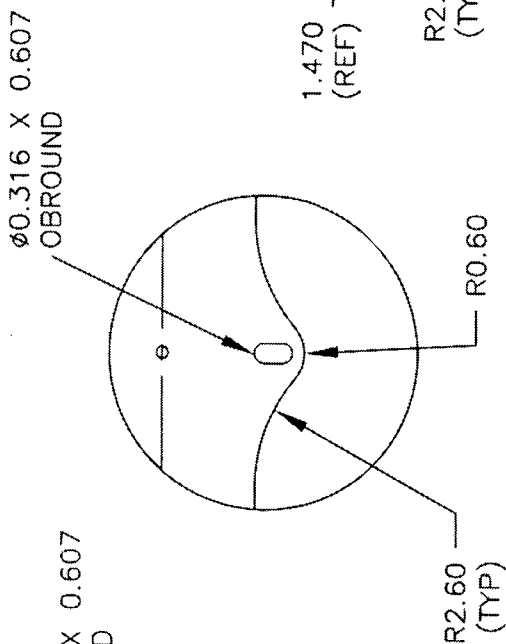


DESIGN PH	DRAWN BY PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D3319	REV. B SHEET 5 OF 5
DATE 05.06.06	TITLE WEARPLATE		SCALE 1:3

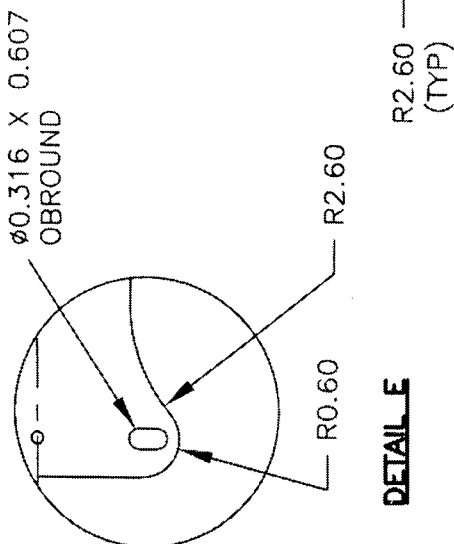
RELEASED
05-09-30



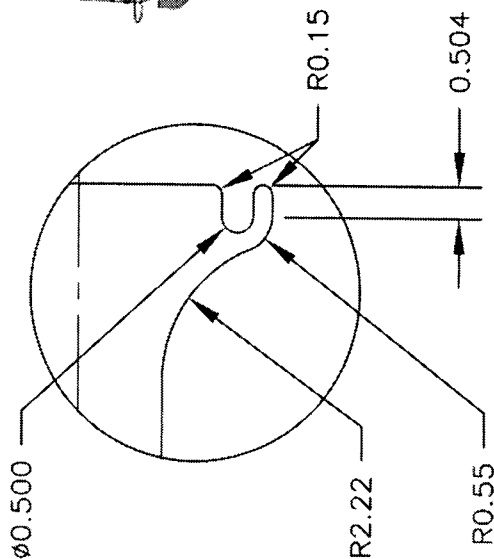
DETAIL J



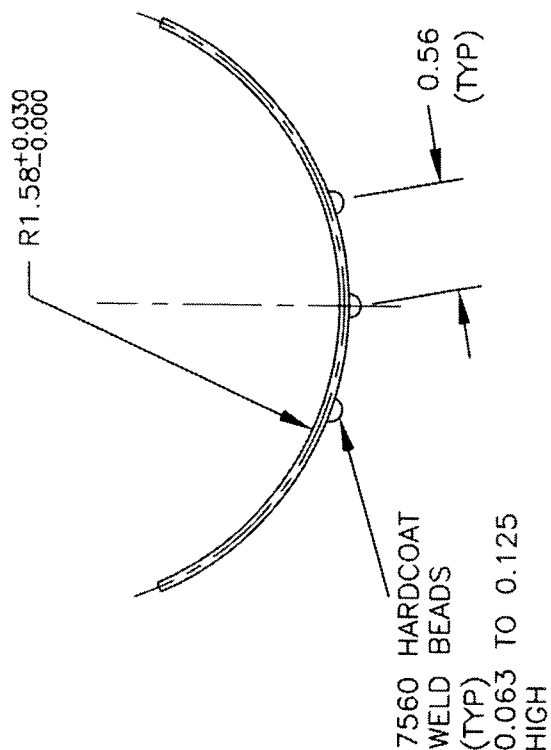
DETAIL F



DETAIL E



DETAIL G



SECTION H-H
(SCALE 1:1)

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries